

Appl. No. 10/089,717
Amdt. dated February 19, 2004
Reply to Office action of November 19, 2003

Remarks/Arguments:

This paper is submitted responsive to the Official Action mailed November 19, 2003. Reconsideration of the application in light of the accompanying remarks and amendments is respectfully requested.

In the aforesaid action, the Examiner requested a correction to the specification and this correction has been made. No new matter has been introduced.

The Examiner had objected to the claims due to informalities, and these have been corrected in the present amendment.

Turning to the art rejection, the Examiner has rejected claims 1-5, 7 and 12 as anticipated by US Patent No. 1,880,098 to Mair, and had also rejected claims 10 and 11 as obvious based upon Mair in view of DE 2918532 to Jendrewski.

The Examiner also indicated that claims 8 and 9 contain allowable subject matter.

By the instant amendment, claim 1 has been amended to address the formal issues raised by the Examiner and further to highlight the novelty and non-obviousness of the present invention over the prior art.

The present invention is a device for locating an article, for example a light source, in a location remote from the base position. The principal embodiment of the invention is as a light pole which allows safe and ready access to the light bulb, for example when the bulb must be changed.

Claim 1 now recites that bolts are located passing through the first and third members. This is clearly different from that which is disclosed in Mair, and further provides benefits as recited in the application. Such benefits include the joint being useful and resistant to failure under heavy load conditions.

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The device of Mair is for a different purpose to that of the present invention, and crucially is not required to bear a load. Its only purpose is to restrict rotation of two pipe connectors. In contrast to the present invention, the clamping of the Mair swivel joint is achieved by an outer collar which, in its preferable form (line 91) screws on to *both* the first and second plates by means of external threads on the plate.

It is immediately apparent that the device of Mair could not be used in a load bearing situation. The entire clamping force, such as it is, is carried by the threads of the collar and the corresponding threads on the first and second plates. The collar is thus placed into tension along its inner wall, with its outer wall carrying very little load. Such an arrangement is inherently weak, as it subjects the collar to significant bending stresses. Should a sizeable clamping force be applied the collar will crack radially.

This weakness will be further emphasized should the swivel connector of Mair be subject to a bending force, such as applied by wind to the lightpole of the present invention. Such a force would cause one side of the collar to be in compression, and one in tension. The resulting stresses would be added to the stresses caused by tightening of the collar, and failure of the collar would quickly result.

In any case, it will be realized that the location of the bolts passing through the first and third plates, and hence away from the periphery of the swivelling means, will reduce the force which bending will apply to them. Further, the transfer of tensile forces through the central shank of the bolt makes failure of a bolt much less likely than failure of the collar of the Mair device. It will be appreciated that a solid, compact bolt provides a much more efficient and reliable transfer of force than a large, hollow collar.

The use of the word "clamping" in relation to the Mair device, taken by the examiner from the specification, is in fact not accurate. Although there will be some amount of pressure between the first and second flanges 19 and 20, by far the most significant force acting to prevent

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relative rotation of the first and second parts 10, 11 is the frictional force acting between the threaded outer edges of the flanges 19 and 20 and the threaded inner portion of the collar 21. This contrasts strongly with the present application, where the friction between the *faces* of the first and second plates, resulting from the application of a true clamping force, is the agent which prevents rotation.

A person of ordinary skill in the art seeking to overcome the problems outlined in the specification of the present application, namely the safe servicing of articles displaced from a base position, would not regard the Mair device as being relevant. Even should the skilled artisan perceive that the swivelling action of the Mair device could be applied to the present situation, the weaknesses of the Mair device under load would become immediately apparent and deter such person from relying on same.

The solution of the present application is a radical departure from the approach of Mair. Rather than having two plates having adjacent outer edges which can be threaded and thus engage a complementary fixing member, the present invention provides a second plate which is held in position solely by a clamping force applied to its face. The second plate of the present invention has no direction engagement with the clamping member. This structure allows for the use of bolts, passing through the first and third plates but preferably around the second plate, which are a much stronger mechanical fastener than collars. It also allows for the forces holding the plates together to be transferred through the plates, rather than about the periphery. New claims 13-15 are drawn to further features related to this connecting structure.

Further, with the device of Mair the "clamping ring 21" has to be rotated to work. Thus there is substantial risk that in operation the clamping ring 21 will rotate inadvertently and become undone. This would be especially the case when the parts 10 and 11 were being relatively rotated.

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Thus, in the context of the present invention if the upper member 14 were to be lowered to the ground relative to the elongate portion 12, there would be a significant risk that the clamping ring of Mair would come undone completely by rotation. This problem is entirely avoided by the present invention as now claimed because the clamping is effected by bolts with associated nuts passing through the first and third members.

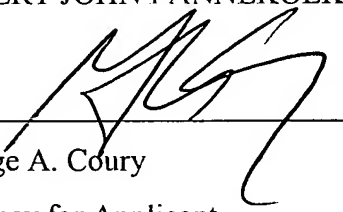
Claims 2-5 and 7-15 all depend directly or indirectly from claim 1 and are submitted to be allowable based upon this dependency. Further, these claims are believed to be allowable in their own right. Further, claims 8 and 9 have been indicated allowable by the examiner.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

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It is believed that no additional fee is due in connection with this response. If, however, any fee is due, please charge same to deposit account number 02-0184.

Respectfully submitted,
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on February 19, 2004.


George A. Coury